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TO : Commissioner for Patents
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FROM : Oleg F. Kaplun, Esq. of Fay Kaplun & Marcin, LLP

DATE : July 24, 2007

SUBJECT : Oncology
U.S. Patent Appln. Serial No. 10/630,885
for *Pressure Actuated Valve with Improved Slit Configuration*
Our Ref.: 10123/00301

NUMBER OF PAGES INCLUDING COVER : 22

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Attorney Docket No. 10123/00301 (03-008)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

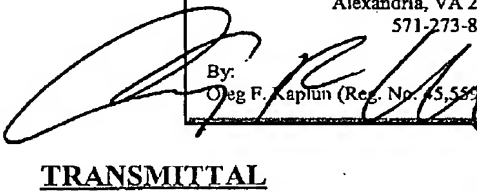
Applicant(s) : Weaver et al.
Serial No. : 10/630,885
Filed : July 30, 2003
For : Pressure Actuated Valve with Improved Slit Configuration
Group Art Unit : 3763
Confirmation No. : 7939
Examiner : Theodore J. Stigell

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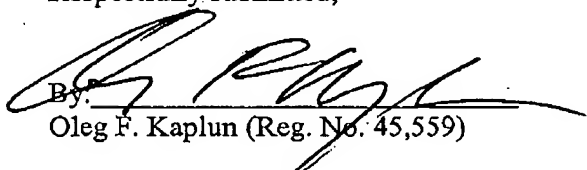
By:  Date: July 24, 2007
Oleg F. Kaplun (Reg. No. 45,559)

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In response to the Notice of Appeal filed on April 25, 2007, transmitted herewith please find an Appeal Brief for filing in the above-identified application. Applicants hereby request a one (1) month extension. Please charge the Credit Card of **Fay Kaplun & Marcin, LLP** in the amount of \$620.00 (PTO-Form 2038 is enclosed herewith). The Commissioner is hereby authorized to charge the **Deposit Account of Fay Kaplun & Marcin, LLP NO. 50-1492** for any additional required fees. A copy of this paper is enclosed for that purpose.

Respectfully submitted,

Dated: July 24, 2007


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Attorney Docket No. 10123/00301 (03-008)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Weaver et al.
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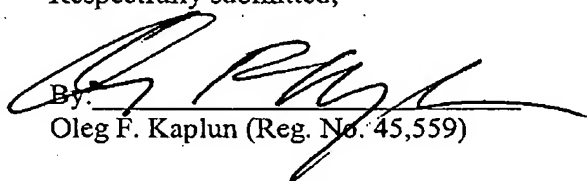
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Serial No.: 10/630,885
Attorney Docket No.: 10123/00301
Reference No.: 03-008

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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In re Application of:

Weaver et al.

Serial No.: 10/630,885

Filed: July 30, 2003

For: PRESSURE ACTUATED VALVE
WITH IMPROVED SLIT
CONFIGURATION

Group Art Unit: 3763

Examiner: Theodore J. Stigell

Board of Patent Appeals and
Interferences

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

In support of the Notice of Appeal filed on April 25, 2007, and pursuant to 37 C.F.R. § 41.37, Appellants present this Appeal Brief in the above-captioned application.

This is an appeal to the Board of Patent Appeals and Interferences from the Examiner's final rejection of claims 1-19 and 23-26 in the Final Office Action dated January 25, 2007. The appealed claims are set forth in the attached Claims Appendix.

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Serial No.: 10/630,885
Attorney Docket No.: 10123/00301
Reference No.: 03-008

1. Real Party in Interest

This application is assigned to Scimed Life Systems, Inc., the real party in interest.

2. Related Appeals and Interferences

There are no other appeals or interferences that would directly affect, be directly affected, or have a bearing on the instant appeal.

3. Status of the Claims

Claims 1-19 and 23-26 have been rejected in the Final Office Action. Claims 20-22 are withdrawn from consideration. Claim 27 has been canceled. The final rejection of claims 1-19 and 23-26 is being appealed.

4. Status of Amendments

All amendments submitted by Appellant have been entered.

5. Summary of Claimed Subject Matter

The present invention, as recited in independent claim 1, relates to a valve apparatus (100) for medical applications. The valve apparatus (100) comprises a first flexible disk (110) extending across a first lumen through which a flow of material is to be controlled. (See Specification, p. 7, l. 29 – p. 8, l. 2; p. 8, ll. 14-16; Fig. 3.) The first flexible disk (110) includes a plurality of first movable elements (118) formed on opposite sides of at least one first slit (112) extending through the first flexible disk (110). (See *id.*, p. 8, ll. 21-25; Fig. 3.) The first movable members (118) are biased so that, when a pressure less than a predetermined threshold value is applied to the first flexible disk (110), the first movable elements (118) are maintained in a closed position in which no flow is permitted past the first flexible disk (110). (See *id.*, p. 9, ll. 10-12; Fig. 3.) When a pressure at least as great as the threshold value is applied to the first flexible disk (110), the first movable elements (118) are moved to an open position separated from one another along the at least one first slit (112), permitting flow through the lumen. (See *id.*, p. 8, ll. 22-27; p. 9, ll. 10-12; Fig. 3.)

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The present invention, as recited in independent claim 15, relates to a dialysis connector (10). The dialysis connector comprises a valve housing (18, 20), a flow passage (30, 32) of the housing (18, 20), and a valve element (100) mounted within the flow passage (30, 32) of the housing (18, 20). The valve housing has a first end (12) connectable to a patient line and a second end connectable to a dialysis line. The flow passage is connected to the patient line and is operatively connectable to the dialysis line. The valve element (100) includes a flexible disk (110) extending across the flow passage. (See *id.*, p. 8, ll. 14-16; Fig. 3.) The flexible disk (110) includes a plurality of movable elements (118) formed on opposite sides of a first slit (112) extending through the flexible disk (110). (See *id.*, p. 8, ll. 21-25; Fig. 3.) The movable members (118) are biased so that, when a pressure less than a predetermined threshold value is applied to the flexible disk (110), the movable elements (118) are maintained in a closed position in which no flow is permitted past the flexible disk (110). (See *id.*, p. 9, ll. 10-12; Fig. 3.) When a pressure of at least as great as the threshold value is applied to the flexible disk (110), the moveable elements (118) are moved to an open position separated from one another along the first slit (112) permitting flow through the flow passage. (See *id.*, p. 8, ll. 22-27; p. 9, ll. 10-12; Fig. 3.)

The present invention, as recited in independent claim 26, relates to a flow shutoff device for medical applications. The flow shutoff device comprises a housing attachable to a patient line and a pressure actuated valve (100) mounted within the housing to selectively restrict flow therethrough. (See *id.*, p. 7, l. 29 – p. 8, l. 2; p. 8, ll. 14-16; Fig. 3.) The valve comprises a flexible disk (110) including a plurality of movable elements (118) separated by a slit (112) extending through the disk (110). (See *id.*, p. 8, ll. 14-16, 21-25; Fig. 3.) The movable elements are biased toward a closed position and are movable to an open position when a pressure applied to the valve (100) exceeds a predetermined threshold value. (See *id.*, p. 8, ll. 22-27; 9, ll. 10-12; Fig. 3.) Flow through the housing is prevented when the movable elements (118) are in the closed position. (See *id.*, p. 9, ll. 10-12; Fig. 3.)

6. Grounds of Rejection to be Reviewed on Appeal

I. Whether claims 1-4, 12-14 and 26 are unpatentable under 35 U.S.C. § 102(b) over U.S. Patent No. 3,788,327 to Donowitz et al (“Donowitz”).

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II. Whether claims 5-7, 9-11, 15-17 and 23-25 are unpatentable under 35 U.S.C. § 103(a) over Donowitz in view of U.S. Patent No. 5,810,789 to Powers et al. ("Powers").

III. Whether claim 8 is unpatentable under 35 U.S.C. § 103(a) over Donowitz in view of U.S. Patent No. 6,099,505 to Ryan et al. ("Ryan").

IV. Whether claims 18 and 19 are unpatentable under 35 U.S.C. § 103(a) over Donowitz and Powers as applied to claim 15, in further view of Ryan.

7. Argument

I. The Rejection of Claims 1-4, 12-14 and 26 Under 35 U.S.C. § 102(b) as Anticipated by Donowitz Should Be Reversed.

A. The Examiner's Rejection

In the Final Office Action, the Examiner rejected claims 1-4, 12-14 and 26 under 35 U.S.C. § 102(b) as anticipated by Donowitz. (See 1/25/07 Office Action, p. 2.) Donowitz describes a double-reed valve 48 that is disposed within a generally cylindrical body member 28 containing an axial fluid passageway 30 extending from an inlet end 38 to an outlet end 40. The body member 28 progressively widens from the inlet end 38 to the outlet end 40. The valve 48 comprises "a pair of opposing flexible web or reed-like members" 50, 52, which are normally urged to a closed position. (Donowitz, col. 3, ll. 3-9.) When the pressure exerted on the bottom surfaces 54, 56 of reed members 50, 52 increases by a predetermined amount relative to the pressure exerted on the top surfaces 58, 60 of reed members 50, 52, the reed members 50, 52 deflect upward (i.e. the valve opens to allow fluid flow through the lumen). (See id., col. 3, ll. 11-18.)

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B. Donowitz does not Disclose a Flexible Disk Including a Plurality of Movable Elements Formed on Opposite Sides of a Slit

Claim 1 of the present application recites a valve apparatus comprising “a first flexible disk extending across a first lumen through which a flow of materials is to be controlled, the first flexible disk including a plurality of first movable elements formed on opposite sides of at least one first slit extending through the first flexible disk, the first moveable members being biased so that, when a pressure less than a predetermined threshold value is applied to the first flexible disk, the first moveable elements are maintained in a closed position in which no flow is permitted past the first flexible disk and, when a pressure at least as great as the threshold value is applied to the first flexible disk, the first moveable elements are moved to an open position separated from one another along the at least one first slit permitting flow through the first lumen.”

In the Final Office Action, the Examiner stated that Donowitz discloses “a first flexible disk including a plurality of first movable elements formed on opposite sides of at least one first slit extending through the first flexible disk.” (See 1/25/07 Office Action, p. 2.) Specifically, citing Webster’s Online Dictionary, the Examiner asserts that the word “disk” refers to a “thin circular object,” and that the valve 48 fits within this definition. (See *id.*, p. 5.) However, even using this definition, the valve 48 of Donowitz is not a disk. The “flexible disk” recited in the claims is a piece of material formed as a disk (i.e., a thin circular member) with a slit extending therethrough. There is no member in the valve 48 of Donowitz with a slit extending therethrough.

Rather, the valve 48 is composed of separate reed members 50 and 52 separated from one another at a central opening. As shown most clearly in Fig. 3, although when the valve 48 is closed, these reed members 50, 52 touch one another at a central interface, the opening (not numbered) extends across the entire diameter of the passageway 30 completely separating the reed members 50, 52 from one another. Thus, the valve 48 is not a disk with a slit formed therein but would be more accurately described as a pair of semi-circular structures placed in proximity to one another. This is consistent with the description of Donowitz which always

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refers to the reed members 50, 52 as separate objects. (See Donowitz, col. 3, ll. 5, 12, 14, 42, 51.) No suggestion is made that reed members 50, 52 comprise a disk, or that the opening may do anything less than completely separate the reed members 50, 52 from one another. That the arrangement of Donowitz is inconsistent with this type of structure is made clear through the description throughout the specification of a disk with a slit formed therein and the recitation in claim 14 that "the first flexible disk is permanently sealed around an entire perimeter of the first lumen." That is, the first flexible disk is a member which extends around the entire perimeter of the lumen.

Furthermore, Appellants submit that the double-reed design of the valve 48 of Donowitz is critical to its function. That is, the double-reed design enables the valve 48 to limit flow therethrough to a single direction. Due to this design, when the pressure differential is the opposite of the above (i.e., when pressure is increased on upper surfaces 58, 60 relative to that on lower surfaces 54, 56), the valve 48 remains closed, rather than opening to permit flow in the opposite direction. (See id., col. 4, ll. 46-51.) Fluid pressure in the opposite direction operates on the reeds 50, 52, forcing them toward each other to add to the biasing force urging the reeds 50, 52 to seal the valve 48. There is no showing or suggestion in Donowitz to modify this shape and there is clearly no showing or suggestion, nor any motivation, to substitute a flexible disk for this double reed valve.

Therefore, it is respectfully submitted that Donowitz neither shows nor suggests a valve apparatus comprising a "*flexible disk extending across a first lumen* through which a flow of materials is to be controlled, the first flexible disk including a plurality of first movable elements formed on opposite sides of *at least one first slit extending through the first flexible disk*, the first moveable members being biased so that, when a pressure less than a predetermined threshold value is applied to the first flexible disk, the first moveable elements are maintained in a closed position in which no flow is permitted past the first flexible disk and, when a pressure at least as great as the threshold value is applied to the first flexible disk, the first moveable elements are moved to an open position separated from one another along the at least one first slit permitting flow through the first lumen," as recited in claim 1 and that claim 1 is allowable for at least these reasons. Appellants respectfully request that the Board overturn the Examiner's

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rejection under 35 U.S.C. § 102(b) of independent claim 1 and of claims 2-4 and 12-14, which depend therefrom.

It is respectfully submitted for the same reasons stated above in regard to claim 1, that Donowitz neither shows nor suggests a flow shutoff device comprising “a housing attachable to a patient line” and “a pressure actuated valve mounted within the housing to selectively restrict flow therethrough, the valve comprising a *flexible disk* including a plurality of movable elements separated by a *slit extending through the disk*, the movable elements being biased toward a closed position and being movable to an open position when a pressure applied to the valve exceeds a predetermined threshold value, wherein flow through the housing is prevented when the movable elements are in the closed position,” as recited in claim 26 and that claim 26 is allowable for at least these reasons. Therefore, Appellants respectfully request that the Board overturn the Examiner’s rejection under 35 U.S.C. § 102(b) of claim 26.

II. The Rejection of Claims 5-7, 9-11, 15-17 and 23-25 Under 35 U.S.C. § 103(a) as Unpatentable over Donowitz In View of Powers Should Be Reversed

A. The Examiner’s Rejection

In the Final Office Action, the Examiner rejected claims 5-7, 9-11, 15-17 and 23-25 under 35 U.S.C. § 103(a) as unpatentable over Donowitz in view of Powers. (See 1/25/07 Office Action, pp. 3-4.) The Examiner stated that Donowitz discloses a device that includes all of the limitations recited in claim 3 except for a housing attached to a dual lumen catheter with a valve apparatus in each lumen to regulate fluid flow. (See *id.*, p. 3.) To cure this deficiency, the Examiner cites Powers.

B. Donowitz and Powers, Alone or in Combination, do not Disclose a Flexible Disk Including a Plurality of Movable Elements Formed on Opposite Sides of a Slit

Appellants respectfully submit that Powers does not cure the deficiencies described above with regard to the anticipation rejections of the independent claims. Powers does not disclose or suggest a valve in the form of a “*flexible disk* including a plurality of first

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movable elements formed on opposite sides of *at least one first slit*" as recited in claims 1 and 15, from which these claims depend; the valve disclosed by Powers includes no such disk or slit. (See Powers, Figs. 8, 10-14, 17-26.) Moreover, as stated above, any modification that would alter the double-reed valve of Donowitz, without specifically providing for the maintenance of one-way flow, is taught away from by Donowitz.

Similar to claim 1, claim 15 recites dialysis connector comprising "a valve element mounted within the flow passage of the housing, the valve element including *a flexible disk extending across the flow passage*, the flexible disk including a plurality of movable elements formed on opposite sides of *a first slit extending through the flexible disk*, the moveable members being biased so that, when a pressure less than a predetermined threshold value is applied to the flexible disk, the moveable elements are maintained in a closed position in which no flow is permitted past the flexible disk and, when a pressure at least as great as the threshold value is applied to the flexible disk, the moveable elements are moved to an open position separated from one another along the first slit permitting flow through the flow passage."

It is respectfully submitted that Donowitz fails to show the invention of claim 15 as indicated by the Examiner for the same reasons stated above in regard to claim 1 and that Powers does not cure this deficiency in regard to either of claims 1 and 15.

Further, Appellants submit that Powers does not disclose or suggest a valve with a slit having "first moveable members being biased so that, when a pressure less than a predetermined threshold value is applied to the first flexible disk, the first moveable elements are maintained in a closed position in which no flow is permitted past the first flexible disk," as recited in claims 1 and 15. (See id.)

Because claims 5-7, 9-11, 16-17 and 23-25 depend from, and, therefore, include all of the limitations of, claims 1 and 15, it is respectfully submitted that these claims are not rendered obvious by Donowitz in view of Powers, and that this rejection should be overturned for at least the same reasons stated above in regard to the anticipation rejection of claim 1.

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III. The Rejection of Claim 8 Under 35 U.S.C. § 103(a) as Unpatentable Over Donowitz in View of Ryan Should be Reversed

A. The Examiner's Rejection

In the Final Office Action, the Examiner rejected claim 8 under 35 U.S.C. § 103(a) as obvious over Donowitz in view of U.S. Patent 6,099,505 to Ryan et al. (hereinafter "Ryan"). (See 1/25/07 Office Action, p. 4.) The Examiner acknowledges that Donowitz does not disclose another pair of slits intersecting at the end of the first slit, as recited in claim 8. (See *id.*) The Examiner cites Ryan to cure this deficiency. Ryan describes a surgical trocar assembly including a disposable valve assembly, a cannula assembly, and a trocar with a handle. (See Ryan, Abstract.)

B. Donowitz and Ryan, Alone or in Combination, do not Disclose a Flexible Disk Including a First Movable Elements on Opposite Sides of a Slit

Appellants respectfully submit that Ryan does not cure the deficiencies pointed out in regard to the anticipation rejection of independent claim 1, from which claim 8 depends. Specifically, Ryan does not show or suggest a "*first flexible disk including a plurality of first movable elements formed on opposite sides of at least one first slit,*" as recited in claim 1. Furthermore, claim 8 recites a "valve apparatus according to claim 3, wherein the first flexible disk further includes *a pair of second slits, each of the second slits intersecting a corresponding end of the first slit.*" (See Fig. 6.) In contrast, Ryan discloses a surgical trocar assembly including a disposable valve assembly with a tricuspid valve. A tricuspid valve is typically constructed with three slits converging at the center of the disk. (See Ryan, col. 7, ll. 50-53.) A tricuspid valve has only one set of second slits at one end of the first slit. (See *id.*, Fig. 2f.) Therefore, it is respectfully submitted that the valve apparatus of Ryan does not comprise "*a pair of second slits, each of the second slits intersecting a corresponding end of the first slit,*" as recited in claim 8. Accordingly, Appellants respectfully request that the rejection of claim 8 over Donowitz in view of Ryan should be overturned.

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IV. The Rejection of Claims 18 and 19 Under 35 U.S.C. § 103(a) as Unpatentable Over Donowitz and Powers in Further View of Ryan Should be Reversed.

A. The Examiner's Rejection

In the Final Office Action, the Examiner rejected claims 18 and 19 under 35 U.S.C. § 103(a) as obvious over Donowitz in view of Powers and further in view of Ryan. (See 1/25/07 Office Action, p. 4.) The Examiner acknowledges that Donowitz and Powers, in combination, do not disclose another pair of slits intersecting at the end of the first slit. (See *id.*) To address this deficiency, the Examiner cites Ryan.

B. Donowitz, Powers and Ryan, Alone or in Combination, do not Disclose a Disk Including Movable Elements Formed on Opposite Sides of a Slit

As discussed above with reference to claims 5-7, 9-11, 15-17 and 23-25, neither Ryan nor Powers cures the deficiencies of Donowitz with respect to any of claims 1 and 15 and therefore, for the same reasons stated above, these references, whether taken alone or in combination, neither disclose nor suggest a valve comprising a "*flexible disk* including a plurality of first movable elements formed on opposite sides of *at least one first slit*" as recited in claim 15 or a "*flexible disk* including a plurality of first movable elements formed on opposite sides of *at least one first slit*" as recited in claim 1. Therefore, Appellants respectfully submit that Donowitz, Powers and Ryan, alone or in combination, neither disclose nor suggest the inventions recited in claims 5-7, 9-11, 15-17 and 23-25 and it is respectfully requested that the Board overturn this rejection.

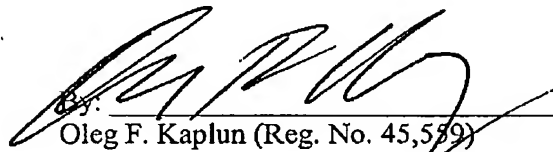
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8. Conclusion

For the reasons set forth above, Appellants respectfully request that the Board reverse the rejection of the claims by the Examiner under 35 U.S.C. §§ 102(b) and 103(a), and indicate that claims 1-19 and 23-26 are allowable.

Respectfully submitted,

Date: July 24, 2007


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CLAIMS APPENDIX

1. (Rejected) A valve apparatus for medical applications, comprising a first flexible disk extending across a first lumen through which a flow of materials is to be controlled, the first flexible disk including a plurality of first movable elements formed on opposite sides of at least one first slit extending through the first flexible disk, the first moveable members being biased so that, when a pressure less than a predetermined threshold value is applied to the first flexible disk, the first moveable elements are maintained in a closed position in which no flow is permitted past the first flexible disk and, when a pressure at least as great as the threshold value is applied to the first flexible disk, the first moveable elements are moved to an open position separated from one another along the at least one first slit permitting flow through the first lumen.
2. (Rejected) The valve apparatus according to claim 1, wherein the first movable elements are biased toward the closed position by the resilience of the material of the first flexible disk.
3. (Rejected) The valve apparatus according to claim 2, wherein the at least one first slit is substantially linear.
4. (Rejected) The valve apparatus according to claim 3, wherein the substantially linear first slit is substantially parallel to a major axis of the first flexible disk.
5. (Rejected) The valve apparatus according to claim 1, further comprising a first housing coupled to a catheter which, when in an operative position, extends into a patient's body to facilitate fluid exchange, the first housing being selectively coupleable to a first external line for fluid transfer between the patient and external devices, wherein the first lumen extends through the first housing.
6. (Rejected) The valve apparatus according to claim 5, wherein the first housing further comprises a second lumen and wherein a second flexible disk extends across the second lumen, the second flexible disk including a plurality of second movable elements formed on opposite

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sides of at least one first slit extending through the second flexible disk, the second moveable members being biased so that, when a pressure less than a predetermined threshold value is applied to the second flexible disk, the second moveable elements are maintained in a closed position in which no flow is permitted past the second flexible disk and, when a pressure at least as great as the threshold value is applied to the second flexible disk, the second moveable elements are moved to an open position separated from one another along the at least one second slit permitting flow through the second lumen.

7. (Rejected) The valve apparatus according to claim 5, further comprising a second housing coupled to the catheter, wherein the first housing is coupled to a first lumen of the catheter and the second housing is coupled to a second lumen of the catheter, the second housing being selectively coupleable to a second external line for fluid transfer between the patient and external devices, and wherein the second housing further comprises a second flexible disk extending across the second lumen, the second flexible disk including a plurality of second movable elements formed on opposite sides of at least one first slit extending through the second flexible disk, the second moveable members being biased so that, when a pressure less than a predetermined threshold value is applied to the second flexible disk, the second moveable elements are maintained in a closed position in which no flow is permitted past the second flexible disk and, when a pressure at least as great as the threshold value is applied to the second flexible disk, the second moveable elements are moved to an open position separated from one another along the at least one second slit permitting flow through the second lumen.

8. (Rejected) The valve apparatus according to claim 3, wherein the first flexible disk further includes a pair of second slits, each of the second slits intersecting a corresponding end of the first slit.

9. (Rejected) The valve apparatus according to claim 5, wherein the first housing is integrally formed with the catheter.

10. (Rejected) The valve apparatus according to claim 5, wherein the catheter includes a tissue penetrating distal end for insertion into a lumen of a vascular organ of the patient and

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Attorney Docket No.: 10123/00301
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wherein the first flexible disk is constructed so that naturally occurring pressures applied thereto by the patient's vascular system are below the threshold value and a pressure applied to the first flexible disk by an external pump is above the threshold value.

11. (Rejected) The valve apparatus according to claim 1, wherein the lumen is a lumen of a dialysis catheter and wherein the threshold value is set so that movable elements move to the open position in response to pressure generated by a dialysis pump connected to the first housing.

12. (Rejected) The valve apparatus according to claim 1, further comprising at least one biasing member coupled to the first flexible disk substantially parallel to the first slit to increase the biasing force urging the first moveable elements toward the closed position.

13. (Rejected) The valve apparatus according to claim 1, wherein the first flexible disk is formed of silicone.

14. (Rejected) The valve apparatus according to claim 1, wherein the first flexible disk is permanently sealed around an entire perimeter of the first lumen.

15. (Rejected) A dialysis connector comprising:

- a valve housing having a first end connectable to a patient line and a second end mounted to a dialysis line;

- a flow passage of the housing being connected to the patient line and being operatively connectable to the dialysis line;

- a valve element mounted within the flow passage of the housing, the valve element including a flexible disk extending across the flow passage, the flexible disk including a plurality of movable elements formed on opposite sides of a first slit extending through the flexible disk, the moveable members being biased so that, when a pressure less than a predetermined threshold value is applied to the flexible disk, the moveable elements are maintained in a closed position in which no flow is permitted past the flexible disk and, when a pressure at least as great as the

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threshold value is applied to the flexible disk, the moveable elements are moved to an open position separated from one another along the first slit permitting flow through the flow passage.

16. (Rejected) The connector according to claim 15, wherein the valve element comprises a flexible disk disposed in the flow passage.

17. (Rejected) The connector according to claim 15, wherein the first slit is substantially linear and is disposed substantially centrally on the flexible member.

18. (Rejected) The connector according to claim 15, further comprising a second slits disposed at end points of the first slit.

19. (Rejected) The connector according to claim 15, wherein the second slits are substantially perpendicular to the linear slit.

20. (Withdrawn) The connector according to claim 15, wherein each of the second slits extends at an angle to the first slit.

21. (Withdrawn) The connector according to claim 15, wherein the first slit comprises a pair of substantially parallel linear slits.

22. (Withdrawn) The connector according to claim 15, wherein the first slit is curved.

23. (Rejected) The connector according to claim 15, wherein the movable elements are unconstrained along the first slit.

24. (Rejected) The connector according to claim 15, further comprising biasing elements coupled to the flexible disk to urge the moveable elements toward the closed position.

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25. (Rejected) The connector according to claim 15, wherein a size and configuration of the first slit is selected to provide desired opening and closing characteristics of the moveable members.
26. (Rejected) A flow shutoff device for medical applications, comprising:
a housing attachable to a patient line; and
a pressure actuated valve mounted within the housing to selectively restrict flow therethrough, the valve comprising a flexible disk including a plurality of movable elements separated by a slit extending through the disk, the movable elements being biased toward a closed position and being movable to an open position when a pressure applied to the valve exceeds a predetermined threshold value, wherein flow through the housing is prevented when the movable elements are in the closed position.
27. (Cancelled)

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EVIDENCE APPENDIX

No evidence has been submitted herewith or is relied upon in the present appeal.

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RELATED PROCEEDINGS APPENDIX

There are no related proceedings or decisions which relate to the present appeal.